Closing the Gap: Fulfilling Low-Income Student Need at Carnegie Mellon University

Artist's Statement

I wrote this proposal with the intention of people reading this to begin understanding what the silent experience of so many of their peers are like. Coming to a school like CMU, sometimes it's difficult to understand that some students may have to do so much more outside of their academic pursuits just to get by. I wanted to highlight these experiences and propose a reasonable solution as to how we as a community with so much power can make a change. I hope deeply that anyone reading this proposal can take a good look at their position here at CMU and find where they may fit into this problem, whether it's as a low-income student or as a person in the position to contribute to change. All I truly hope for this proposal is to change the life of even one person or the perspective of a few.

Executive Summary

Carnegie Mellon University should create a donation-based lending library focused on academic resources (such as textbooks, academic electronic devices, school supplies ,etc.), in order to make equitable change for under-resourced students.

Carnegie Mellon University has recently accepted an increasing number of students from disadvantaged backgrounds. The increase in economically, racially, and ethnically diverse students brings greater student involvement; broader backgrounds, experience, and skill to the classroom; and diverse ways of thinking that enrich both the academic and student experience. Due to this increase, Carnegie Mellon University has to do more to accommodate the needs of their diverse student body.

Background

Many students who come from low resource backgrounds tend to struggle more in high pressure academic environments due to the lack of support, both financial and mental, that is needed to create an equitable academic environment. Financial concerns tend to develop into larger issues that pervade multiple areas of life. Research has shown that "…4 out of 5 top stressors in [low-income students] lives' involved personal finances, and that these stressors affected their academic progress and performance" (Adams 362). Another concern for low-income students is time constraint. This constraint is often caused by the need to work to remain financially stable. Additional strain may be added due to the extra academic help that is needed to gain an understanding of difficult academic topics. Many low-income students come from low-resource backgrounds where there may have been a lack of extra aid, like tutoring, or opportunities to participate in more academically rigorous environments such as Advanced Placement (AP) classes.

The need for a lending library on CMU's campus grows directly from the stressors under-resourced students face. Stressors like the lack of opportunity, lack of access to resources, and greater time put into academic pursuits culminate and give way to mental health issues, which"…may be exacerbated for low-income students and/or first generation students due to the negative impact that financial strain has on perceived stress" (Adams 363). The low-income student experience does widely vary but the stressors are uniform. Despite the difficulties of higher education, disadvantaged students are driven toward academia because of increased opportunity. Students may measure opportunity differently, but the ones to highlight are opportunities for skill-sharing, social mobility, and/or skill development. Despite the motivators

above "…four year institutions struggle to achieve equitable degree attainment rates for [disadvantaged students]" (Cuellar 274). A lending library is one support to improve academic equity.

Each of the stressors discussed above gives way to another, leading to a seemingly unbreakable cycle for economically disadvantaged individuals. Difficulties in breaking this cycle are the main barriers for disadvantaged students to display their fullest potential in academic and social settings. Significantly, institutional admittance procedures *rely* on the concept of potential. Institutions look at a few basic criteria when determining eligibility for admittance, including school grade point average (GPA), Scholastic Aptitude Test (SAT) scores (and/or American College Testing (ACT) scores), mentor recommendations, and personal statements ("Admission Decisions"). In the case of low income students, resources to hone the skills needed to fulfill these criteria may be lacking. Low income students may be coming to a university from underfunded high schools with less rigor or from rigorous high schools offering little academic aid. In either situation, the grade discrepancy seen in the transition period between high school and college is caused by unmet needs. The unmet needs can and often do include personal needs followed by academic needs (Marchetti). Institutions are often only capable of fulfilling the academic needs of a student, which limits the potential of even admitted under-resourced students. In the case of under-resourced students, supplemental help in the academic setting is a near requirement to create an equitable educational environment given all of the factors above. This proposal explores resource sharing through a lending library, which is one part of a greater solution.

 Supplemental help in the context of this proposal includes educational resources, tutoring, and training for the world of higher education and industry. A lending library could work with existing resources that support students to provide not only physical resources but educational and professional ones as well. Supplemental help is not indicative of a lack of preparedness or capability for challenging higher education situations but instead indicative of the setbacks in an individual's life and their ability to overcome the hurdles of financial and other burdens that most other students do not struggle with. Even looking at one component (tutoring) in the greater collection of supplemental help shows that "students attending SI (supplemental instruction) sessions earn higher final grade averages and receive fewer low grades and withdrawals than non-attendees" (Congos). This example perfectly demonstrates the relationship between services offered, effort given, and obtained outcomes. The correlation is that often "…SI attendees enter college with lower predicted academic potential and indicators of industriousness," which shared resources could help to remediate (Congos). The intersection between level of educational aid and perceived academic competence encapsulates the main problem my proposal addresses and displays the need for destigmatized and readily accessible resource-sharing spaces.While Carnegie Mellon University has many resources to help underprivileged students it is important to acknowledge the perception of those spaces by the individuals they are meant to serve. Often the perception surrounding these spaces and those that frequent them is negative due to the idea that these spaces and people are 'lesser than' other CMU students. This knowledge becomes fundamental when considering many aspects of developing a lending library.

Problem

Many low-income students at Carnegie Mellon University (CMU) are struggling to get the resources they need to perform to their full potential academically. Current first year student, Victoria Nguyen, describes her financial position as "making do with what I have." The effect of financial challenges on students may cause them to revert into survival instincts such as forced resourcefulness. Forced resourcefulness in the context of this proposal refers to students finding less than ideal ways to support themselves in the avenues where actual aid could be possible. A relevant example of this phenomena is the torrenting of digital copies of textbooks. Torrenting is an illegal means of obtaining information as it infringes upon copyright policies. Students who try to avoid such methods often have no other options but to go without the resources they may need for classes.

Either of these routes is highly detrimental to the student's ability to effectively work, as some courses have costly mandatory material requirements. For example, the average price per textbook is estimated at $105.37 *per textbook*. This doesn't include extraneous class specific costs which can be estimated at $1,121 minus textbook costs (*Average cost of College Textbooks,*Education Data Initiative). These numbers can also vary significantly by major depending on the tools and quality of said tools needed.

This thought draws back to the issue of lacking financial support as students may have to find a means to fulfill the cost associated with material compliance. The importance of accessibility particularly in the case of textbooks comes from lessening the "… wall between authors of books and the ultimate users of books…" (Baraniuk).

There is a fundamental disconnect forming between low income students and academia due to removable financial barriers. The lense of this issue within the context of this proposal is limited to the academic experience at CMU and the implications of CMU's status as a top institution for the student experience. It is important to recognize that this experience should be as equal as it can be for all students, for all *Tartans*. CMU holds the status of being a top educational university ranked number 25 by the *U.S. News & World Report* ("Best National University Rankings"). Part of that ranking comes from the rigor of its education *and* the diversity of its student body. This ranking creates a connection between the two. Rigor at CMU has begun and remained high for several years shown by the consistently high ranking of the university. However, diversity began low and has increased steadily in each enrollment year (see Figure 1).
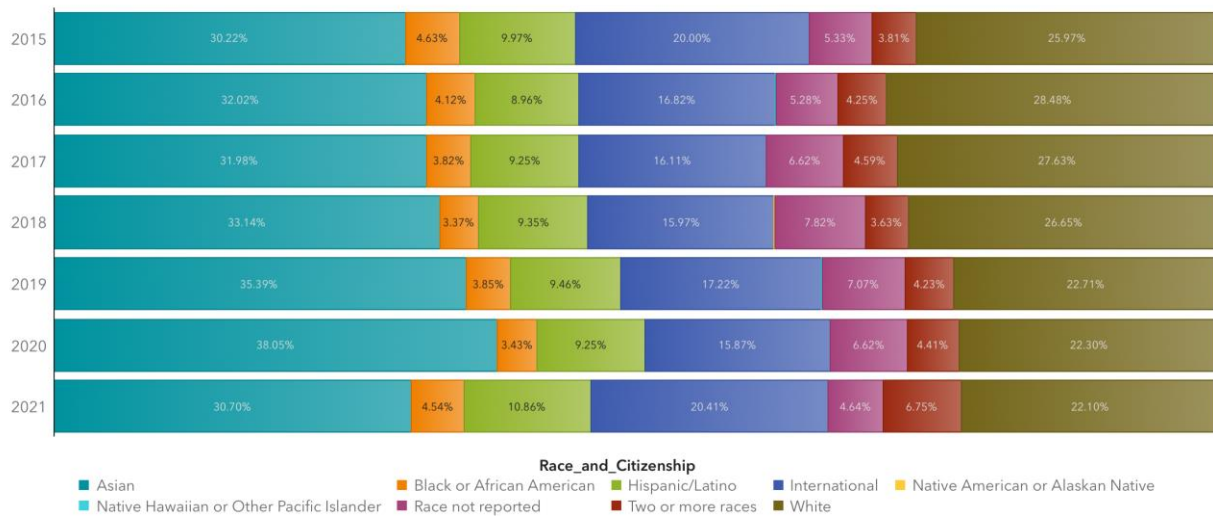

Figure 1: Admissions data at CMU from 2015-2021 displaying racial distribution in each acceptance pool.

Despite this increase, the level of rigor has not adjusted to accommodate it. The reason for stability of rigor is that students continually prove themselves capable of completing an education at CMU. CMU is correct to apply blanket statements to the basic capabilities of the

student body; however, they are not acknowledging students who do not fall within that average calculation of student success. The way that universities can acknowledge both the needs of disadvantaged students and still cater to the majority is through equitable application of academic resources. Equitability is an important distinction for this proposal because equality in this context would give all students the same resources. When applying extra resources to average and above average students, the gap between statistically below average students and average and above average students can increase or remain the same. By offering resources equitably through an academic lending library, parameters for success, such as exams and homework, could be compared equally.

The topic of inequitable resources is relevant because of the aforementioned increase in diversity. To ignore the needs of this growing body would be exploitative. A main idea put forth at CMU is that "…our people are our greatest asset" ("Diversity, Equity and Inclusion"). As diversity in terms of differently resourced students increases, so do diverse ways of thinking and teaching, which are incalculable assets to both the student experience and development of knowledge. To gain from these under-resourced students without providing for them at the most basic level continues the societal issue of minority exploitation.

The exploitation of knowledge creates a certain discomfort among the affected student population. Since the university becomes a sort of four year home, it should be a place where students feel comfortable and free to express themselves and their opinions. The inclusion of shared resources into student life at CMU would create a more welcoming and comforting

environment for disadvantaged students, alleviating one of the multiple outside stressors on this specific student population.

Solutions

Although the idea of fulfilling need is a broad concept, the ability to start change does exist. One small way CMU can begin to make change for these disadvantaged students is by allowing the creation of a lending library. The lending library would include shared resources such as books, tools (calculators, school supplies), access codes, and other sharable goods. An important part of the college experience is individual growth and independence. By creating a lending library, we will be creating a space where students can both reach out for help and feel independent at the same time. The library would be donation-based. As exemplified in Cornell's Durland's Alternatives Library, a few benefits that come from a donation based library is the consolidation of materials and the ability to give back to a community. Consolidation of materials benefits the student body greatly as oftentimes departments leave free books or supplies scattered across the CMU campus, making it hard to truly have access to them (see Figure 2 and 3).

Figure 2: Stack of free educational and independent reading books found in Baker Hall.

Figure 3: Stack of free binders found in Wean Hall

Creating a space where free resources can be donated and housed when returned, allows students to equally find and access needed materials. In terms of community contribution, students could

have a space where they can both benefit from and provide for others. Community projects such as these help break a cycle of unhealthy self-reliance and open up users to the idea of collective change.

There have been successful lending libraries based on the same ideas and core concepts at other well-respected universities. Cornell University hosts an independent, non-profit, donation-based lending library which has many parts similar to the ones discussed in this proposal. The group running this library, Durland Alternatives Library, believe that "… education is a basic human right…" and they exemplify that message through their programming. CMU holds very similar values shown in their status as a need-based and need-blind university ("Applying for Aid") and by their current programs targeted toward under-resourced student groups, such as Tartan Scholars. The inclusion of a lending library into the current programs at CMU allows for students to participate in being a part of the change they want to see. The Durland Alternatives Library has a much more expansive program than currently needed to fulfill student needs at CMU; however, potential program expansion is important to consider for the evolution of academic settings.

Another great example of a successful donation-based resource center out of CMU is Tartan Ambitions, a donation-based professional attire distribution center targeted toward low income students, specifically Tartan Scholars. The existence of a program like this shows that it is possible to sustain and have a need and a use for projects similar in concept.

A few beneficial expansions of the lending library could include ideas such as an academic materials database and/or curated resource packages. A materials database would act as a way to

be transparent about resources for the most taken and cost incurring classes. The database could include textbooks that are commonly used in large lectures, required art supplies, and generally useful college materials. There could also be cost estimates for these items in the database as well. Ideally, the lending library would be able to supply all of the most highly requested items or provide some form of aid to students who might request materials that are not readily accessible through the library.

Another expansion would be curated resource packages. Curated resource packages would be a more focused version of a part of the database offering a list of non-mandatory but useful resources. These resources may include a list of open educational resources, educational instruction videos, and tutor connections.

Implementation

Feasibility

The primary investment associated with this project involves materials costs. Material donations would serve as a first attempt for acquiring resources, but in the case of low participation several other actions could be taken. CMU as a renown institution has connections and/or tangential relationships with several large companies. The ability to use CMU's status and reputation to reach out to these companies for aid might create a more stable and long-lasting project. In the case that materials donations/aid is not viable, fundraising might be the next course of action. The Durland Alternatives Library at Cornell University functions by using monetary donations from targeted and/or interested groups, which could be an easily replicable model for a CMU-

based lending library. In the case of the prior options being unsustainable, CMU could provide a small stipend to jump-start the establishment and growth of this project.

Secondary to the costs associated with establishing the library are the costs associated with running the library. As this project is focused on the provision of resources for and the independence of low-income students, establishing a library maintenance job as a student work-study opportunity would encourage student involvement and add to the amount of resources capable of being provided by the library.

Requirements

To begin this project, space must be allocated for it to exist in. With the intention of the project beginning small and growing to meet the demonstrated need at CMU, it could primarily reside in a small space in one of several centers including the Student Academic Success Center, Center for Student Diversity and Inclusion, or the Career and Professional Development Center. Each of these offices have private study rooms or larger open spaces that could be lent for the existence of a project aligning with their core values.

The minimum time requirements for the project to run successfully can be broken into two parts including the time required pre-establishment and post-establishment. Pre-establishment time commitments hinge on coordination and set-up time. Coordinating and acquiring the resources being offered in the library could be time intensive but manageable if taken on by a group of people interested in the project. Post-establishment time relies heavily on the timeline in the pre-establishment period. More resources require more set-up time and management for the lending library. The library would have a fixed management and operation time spanning about 15 hours

per week broken down into 3 days of 5 hour increments or 5 days of 3 hour increments with the former being preferred based upon the average student schedule and availability. Beyond these hours, there would be available email correspondence for students to inquire about availability of materials and current needs capable of being fulfilled by the library.

Conclusion

The increase in the quality of education for low-income students is worth the dedication to a low expenditure project such as the lending library. The means to successfully run this project exist at CMU. This proposal serves as a way to highlight those means, as well as explain the problems surrounding the solution. One problem that meaningfully captures the larger issues is the inability to provide a truly equitable education without providing for those with the most need. Providing aid to low-resource students does not take away from the university, but allows it the chance to begin creating tangible change in a much larger societal issue.

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